APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,571	01/31/2006	Masayoshi Sawai	Q92871	3691

23373   7590   11/08/2006

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EXAMINER
LAU, TUNG S

ART UNIT	PAPER NUMBER
2863	

DATE MAILED: 11/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/566,571	SAWAI, MASAYOSHI
	Examiner	Art Unit	
	Tung S. Lau	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>01/31/2006</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-15</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-15</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>31 January 2006</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Preliminary Amendment

1.   Preliminary Amendment filed on 01/31/2006 is noted by the examiner.

Priority

2.   Receipt is acknowledged of paper submitted under 35 U.S.C. 119(a)-(d), which

papers have been placed of record in the file.

Drawings Objection

3.   The drawings are objected to under 37 CFR 1.84 (n)(o) which requires legends

on drawings and its identification in figures 1, 4a, 5, 7a, 8, 10a, 11a, 11b, 11c the

blocks in fig. 1, 10e, 1s, pe, p0, 10s, ps, ws, fig. 4a, Ve, V5, No, v2, Vo, Vs, ws,

N1, N2, N3, N4, N5, Ne, in fig. 5, n1-n6, fig. 7a, section of No-Ne, W0-W5, Ws,

Ns, Vs, in fig. 8, Section of PO'-1s' and 10s', In fig. 10a, section of No-Ve and Vs,

WO', in fig. 11a, section of PO-Ve1, Vs, in fig. 11b, section of PO-Ve2 and VS, in

fig. 11c, section of PO-Ve3 and Vs. Should be provided with descriptive labels

and identification (e.g. software protocol, transmitter, frequency hopper, receiver,

etc), correction is required.

Claim Rejections - 35 USC § 101

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 101 that

form the basis for the rejections under this section made in this Office action:

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and
requirements of this title.

Claims 1, 2, 4, 12, 10, 3, 5, 13, 11, 6, 14, 7, 15 and 8 are rejected under 35

U.S.C. 101 because the claimed invention is directed to non-statutory subject

matter.

In claim 1, the method for calculating a rotation angle of a wire harness including

setting vectors, calculate angles and adding angles. These claims appear to

merely describe mathematical transformation and lack of concrete and tangible

result. The practical application of the claimed invention cannot be realized until

the information determined is conveyed to the user. For the result to be tangible it

would need to output to a user or stored for later use. Hence the claims are

treated as nonstatutory functional descriptive material (See MPEP § 2106 and

OG Notices: 22 November 2005, Guidelines for Subject Matter Eligibility,

http://www.uspto.gov/web/offices/com/sol/og/2005/week47/patgupa.htm

See MPEP 2106 IV B (1) (b).

For instance in claim 1, the method steps of the method for calculating a rotation

angle of a wire harness including setting vectors, calculate angles and adding

angles are data manipulation. This fails to present a concrete, tangible useful

result. An example of a concrete, tangible useful result may include displaying,

storing for further use, generating a control signal etc. of the calculating and

adding angles. The applicant should review the disclosure to determine what

type of tangible result is being carried out in this instant application and such

limitation be included in the claim. For further guidance see

http://www.uspto.gov/web/offices/com/sol/og/2005/week47/patgupa.htm

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this
or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1, 2, 10, 6, 14, 7, 15, 8 and 9 are rejected under 35 U.S.C. 102(a) as

being anticipated by Kawakita et al. (U.S. Patent Application Publication

2002/0161535, Pub. Date Oct. 31, 2002).

Regarding claim 1:

Kawakita describes a rotation angle calculating method of a wire harness

(abstract), in which a rotation angle of the wire harness is calculated at an

arbitrary measuring point of the wire harness when the wire harness is deformed

from a first shape to a second shape while a fixed point of the wire harness is

fixed (fig. 23, 19), the rotation angle calculating (page 10, section 134, page, 14,

175, specially the movement of an angle in the door) method, comprising the

steps of: setting a plurality of intermediate points between the fixed point and the

measuring point of the wire harness in the second shape (fig. 5, unit 3 on the

door, and 5 on the body of the car), wherein the fixed point (fig. 23), the

measuring point and the intermediate points are set as nodes respectively (fig.

15, point 5 on the body and point 3 on the moving door of the car)); setting

vectors at the nodes of the wire harness in the second shape as node vectors

respectively (fig. 10, 15); calculating angles (page 10, section 134), each of

which has a rotation direction (page 10, section 134, page, 14, 175, specially the

movement of an angle in the door), wherein each of the angles is defined

between the node vectors at the adjoining nodes (fig. 5, 9, 10, 15, an element of

vector space); and adding the angles to each other so as to calculate a rotation

angle having a rotation direction at the measuring point (fig. 15).

F I G . 5

F I G . 7

$(D1-D2)/2$

$D1-D2$
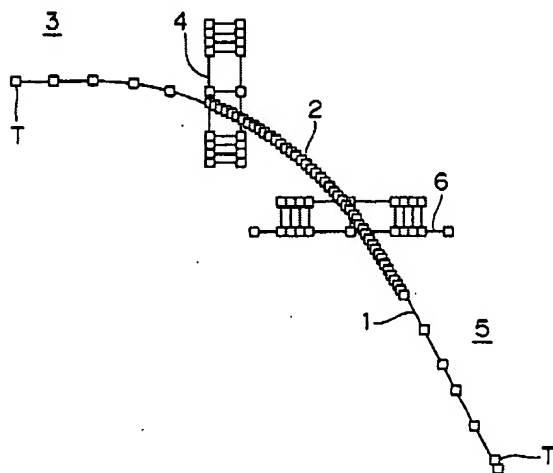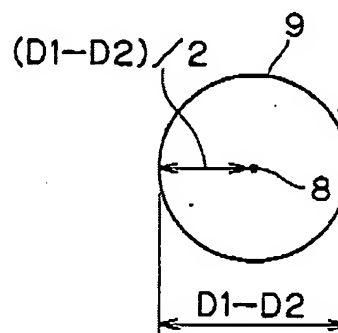
Regarding claim 9:

Kawakita describes a rotation angle calculating apparatus (page 2, section 0023,

lines 19-23) for calculating a rotation angle of the wire harness at an arbitrary

measuring point of the wire harness when the wire harness is deformed from a

first shape to a second shape while a fixed point of the wire harness is fixed (fig.

5, 9, 15), the rotation angle (page 10, section 134, page, 14, 175, specially the

movement of an angle in the door) calculating apparatus, comprising: a node

setting unit (fig. 9, page 2, section 0023, lines 19-23), which sets a plurality of

intermediate points between the fixed point and the measuring point of the wire

harness in the second shape (fig. 4, 9, 10, 15), wherein the fixed point (fig. 4, 9,

10, 15), the measuring point and the intermediate points are set as nodes

respectively (fig. 4, 9, 10, 15); a node vector setting unit, which sets vectors at

the nodes of the wire harness in the second shape as node vectors respectively

(fig. 4, 9, 10, 15); an angles calculating unit (page 10, section 134, page, 14, 175,

specially the movement of an angle in the door), which calculates angles, each of

which has a rotation direction (page 10, section 134, page, 14, 175, specially the

movement of an angle in the door), wherein each of the angles is defined

between the vectors at the adjoining nodes (page 10, section 134, page, 14, 175,

specially the movement of an angle in the door, fig. 15); and an angles adding

unit (page 10, section 134, page, 14, 175, specially the movement of an angle in

the door), which adds the angles to each other so as to calculate a rotation angle

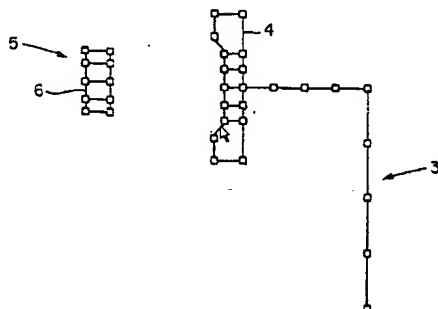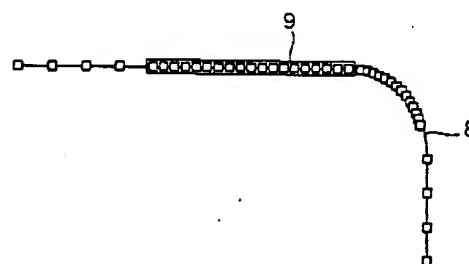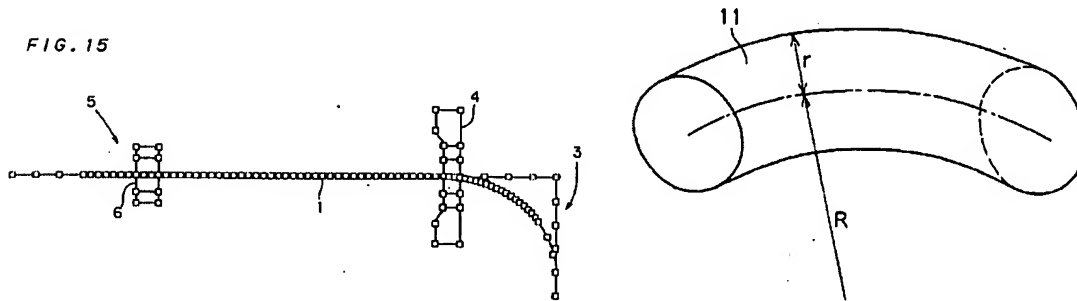having a rotation direction at the measuring point (fig. 9, 10, 15).

FIG.9

FIG.10

Regarding claim 2, Kawakita further describes the vectors at the nodes of the wire harness in the second shape are tangent vectors (fig. 4, 15).

FIG. 16

FIG. 15

Regarding claim 10, Kawakita further describes a computer-readable recording medium, which causes a computer to execute the rotation angle calculating method (fig. 9, page 2, section 0023, lines 19-23, page 10, section 134, page, 14, 175, specially the movement of an angle in the door).

FIG. 18

FLEXURE LIFE
(NUMBER OF TIMES)

AMOUNT OF CHANGE IN STRAIN
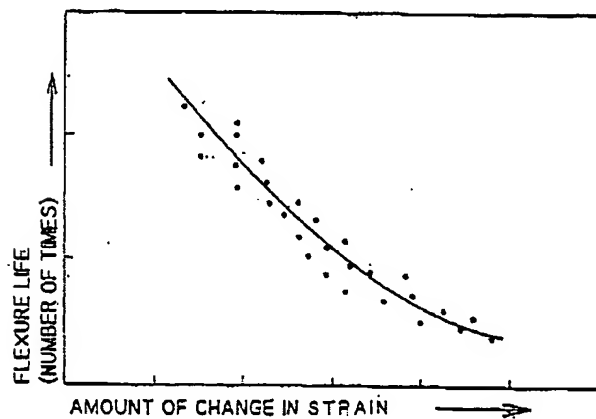
Regarding claim 6, Kawakita further describes the plurality of nodes are set on a center line of the wire harness (fig. 7, 16).

Regarding claim 14, Kawakita further describes a computer-readable recording medium, which causes a computer to execute the rotation angle calculating method (fig. 9, page 2, section 0023, lines 19-23, page 10, section 134, page, 14, 175, specially the movement of an angle in the door).
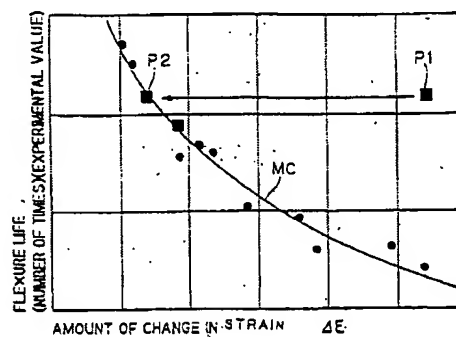
FIG.19
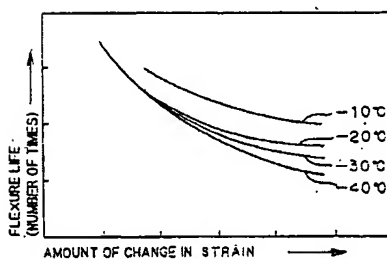
FIG.20

Regarding claim 7, Kawakita further describes distance between the adjoining nodes is set as following formula; wherein

the distance R is smaller than $\pi \cdot d/2$; and

"d" is a diameter of the wire harness.

(fig. 7, page 2-3, section 26, where cross sectional area of the wire is calculated)

Regarding claim 15, Kawakita further describes a computer-readable recording medium, which causes a computer to execute the rotation angle calculating method (fig. 9, page 2, section 0023, lines 19-23, page 10, section 134, page, 14, 175, specially the movement of an angle in the door).
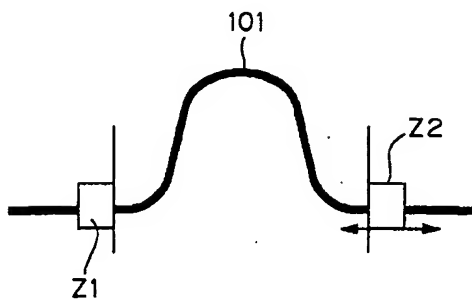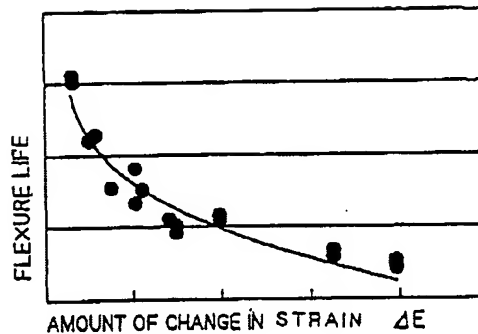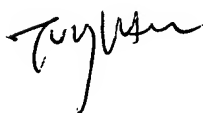
FIG.26

FIG.23

Regarding claim 8, Kawakita further describes a computer-readable recording

medium, which causes a computer to execute the rotation angle calculating

method (fig. 9, page 2, section 0023, lines 19-23, page 10, section 134, page, 14,

175, specially the movement of an angle in the door).

Contact information

6.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Tung S Lau whose telephone number is 571-272-

2274. The examiner can normally be reached on M-F 9-5:30. If attempts to

reach the examiner by telephone are unsuccessful, the examiner's supervisor,

John Barlow can be reached on 571-272-2269. The fax phone numbers for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR

only. For more information about the PAIR system, see http://pair-

direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-

free).

Tung S. Lau

AU 2863, Patent examiner

November 6, 2006